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ABSTRACT

Technical communication specialists today really have to be technology experts as well as effective writers--even their titles have changed to "information designers, information engineers, or document developers." Teachers of technical communication should be up to date in the classroom to meet the changing needs of the workplace. Another goal should be the integration of theory and practice. Even in introductory technical communication courses, students need to realize that composing the most standard technical text poses more than one problem with many possible solutions requiring careful attention to the interplay between the audience, the environment, and the document. It is important to rethink technical communication pedagogy on several levels, asking: (1) "Who is the clientele?"; (2) "What are they being prepared to do?"; (3) "Do current programs do what they need to do?"; and (4) "What approach should be taken in course development?" Classes not only include people who want to specialize in technical writing, but technical professionals such as scientists, engineers, and software developers who need to know how to write well in their jobs. Technical communication educators are missing the boat if they teach students "how to" without giving them the tools they need to decide "when to" and "why." It is necessary to rethink the entire curricula with an eye for emphasizing the rhetorical nature of the field, from the individual course to course sequences and requirements. (Appended are reproductions of two slides.) (CR)

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Rethinking Technical Communication Pedagogy:

A Poststructuralist View of Program and Course Design

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These days it's become almost a cliché to say: "The rapid development of technology is causing enormous changes in the field of technical communication." Practitioners no longer use blue pencils and IBM Selectrics as their primary tools of trade. Instead, technical communication specialists really have to be technology experts as well as effective writers to get the job done. Even the titles of technical communication specialists have changed over the years. Almost of all of us in this room take phone calls from recruiters or managers who are looking for "information designers, information engineers, documentation developers, and so on....." Those titles are certainly different from the old label, "technical writer."

With all of these changes and with--pardon another cliché--the approach of the new millennium, teachers of technical communication want to be up to date in classroom methods so we can meet the changing needs of the workplace. But I'm skeptical about how we're changing and about whether we as a profession really understand the nature of the changes that need to take place. So if you'll allow me to indulge in a bit of carmudgeonry--if that's a word--I'll share some thoughts with you. I think it's important to rethink technical communication pedagogy on several levels:

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- Who is our clientele?
- What are we preparing them to do?
- Do our programs and courses do what they need to do?
- What approach should we take in course development?

Who Is Our Clientele?

This question is a thinly disguised version of the question we ask our students: "Who is your audience?" And again, as the students in their own complex projects know full well, our audience is not a homogeneous group that allows us to target one specific set of needs. Technical communication classes include people who want to specialize in technical writing and ultimately find jobs as technical writers (or information designers, documentation developers, etc.). They also include technical professionals such as scientists, engineers, software developers, and so forth who need to know how to write well on their jobs. As we all know, budget reductions mean that in many companies all the writing that gets done gets done by these people (scientists, engineers, etc.) , so they need to know more than just the rudiments of technical communication--even in the basic courses.

Each of these audiences differs in what is needed from the courses we teach. If we're lucky, these different groups are separated into different classes, but often we're not so fortunate. This dual audience makes the job of teaching technical communication

especially difficult because our classes are regarded as "service courses" for the engineers and scientists and as central to those looking to us for training in professional careers. How can our course content and teaching methods bridge these different audience needs? Can we build curricula that make sense to both sets of students?

At present, we usually teach the technical professionals the basic forms of communication (proposals, reports, correspondence) and go into more depth with the students who want to make professional careers of technical writing. Theories of rhetoric, document design, and ethics run through the syllabi for these advanced students. In the frequent instances when we have a mix of students, we most often teach the forms with a quick dip into background theory. Courses for all of these audiences are often designed so that participants are given workplace problems to solve or a long writing project to complete, or both.

What Are We Preparing Them To Do?

It's not only technological change that affects how we teach technical communication, it's economic change as well. A decade or so ago, we appropriately prepared our students first to be good writers and then to specialize in various forms of technical communication. They emerged from our classes familiar with the basics of technical writing and specializing as technical proposal writers, user manual writers, technical editors, marketing writers, or what have you. But the marketplace has changed dramatically in the last generation, as the slide points out. *[Slide 1]* In the past,

employees often stayed with one company for the duration of their careers, rising through the ranks and building a traditional set of skills suitable to that company. Today, employees are more likely to build individualized careers that cross many boundaries and include employment with different companies and different types of jobs along the way. Rather than making a commitment to a compnay, people are making a commitment to themselves to develop meaningful, muti-dimensional careers. Today's workplace trends *[Slide 2]* create environments where workers need to know cross-disciplinary skills to be able to contribute in a variety of ways. The advances in technology enable them to be more productive by giving them the capability to do more tasks. Proposal writers can be designers; document developers are developing interfaces; and the Internet makes graphic designers, marketing writers, sound technicians, and HTML experts of everyone. And everywhere in business and industry--even in academics--writing is about collaboration and negotiation; it isn't about a single-authored text written from a postion of authority.

Do Our Programs and Courses Do What They Need To Do?

So where does this leave us? Our clientele is complex, technology is changing, and the marketplace itself is changing. What have we done to keep pace? Today's world demands flexibility and vision--especially as we approach the new millennium with its exciting challenges and possibilities.

Ironically, in a field where change is rapid, technical communication teachers often rely on the traditional methods of teaching practical subjects: the basic skills are presented in

highly structured formats with the advanced courses taught either as classes in specific technological applications or as in-depth coverage of specialized forms: proposals, writing online, medical writing, interface design, etc. We do keep up with the technology, however. Many of our faculty are more enamored of teaching technology and tools than teaching intellectual approaches to technical communication.

We also tend to teach technical writing as if writers in the workplace have authority or control over their documents. Students may be surprised to learn that in the "real world" they are asked to use writing as a process for negotiating meaning and moving recalcitrant people from one view to another. The oral communication that surrounds the writing process is just as important, if not more so.

Another current goal for our classes is the integration of theory and practice. Unfortunately, in many classrooms, they inform one another from a distance at best. Theory is presented as a discrete topic that can be taught and then overlaid as a sort of cover sheet on practical applications. In my early days of teaching rhetorical theory, after struggling through a whole semester with Plato, Aristotle, Foucault and others, I confidently asked my students how the material applied to technical communication. "It doesn't," they replied, "but it sure is nice to exercise our brains in this fashion."

More often than not, theory is discussed in terms of design techniques, or relegated to a footnote discussion of ethics in the workplace, or taught as composition theory with little

effort to connect it to practice. Let me give another example. In a recent hiring effort for a technical communication position, our department received an incredible number of applications. We weeded out the clearly inappropriate ones, narrowed the list to a manageable number and reviewed the *CVs* seriously. All but four or five of these finalists came with primary work in rhetorical theory and little practical application or experience. During the first round of interviews, many candidates could speak knowledgeably about Foucault and Friere, but not about pdfs, benefits analyses, and document cycles--or more importantly, about how theory and practice really connect except on the rarefied academic level. Across the country graduate programs in technical communication accept students who move directly from undergraduate degrees in English or other majors but who never have actually worked in a company--and many of these grad programs do not build in the practical experience component into their curricula.

And still another example. We design computer programs and manuals via set structures instead of allowing users to customize for themselves or design computer applications that are "smart" enough to take into consideration the politics of the workplace.

These traditional methods of technical communication instruction produce students who may know forms and can mix and match what they've learned in class order to solve problems in the workplace, or who may know theory and have idealistic notions about how to apply it, but who lack the vision and flexibility so essential in today's market and so

vital for the future. Despite our attention to new technology, much of our curriculum is static, not dynamic, looking backward, not forward.

What Approach Should We Take in Course Development?

By teaching our courses in this fashion, we are allowing ourselves to be led rather than preparing our students to be leaders. Within the current boundaries of technical communication, we are indeed teaching our students to be problem solvers, but not to identify the problems in advance and shape a vision for the future. We have become "reactive" rather than "pro-active" in the intangible areas that really count, while we are whiz bangs at dealing with the tangible structures of technology.

It's time to move beyond the conventional models of teaching technical communication and re-envision the boundaries of our field. Instead of assuming we should give the students only the specific skills necessary to find productive employment and to survive in the workplace and to prove that we understand and can use the latest technology, we should also be teaching them to ask the right questions and foreground the rhetorical nature of the communication process. Further, I think we are missing the boat if we teach our students "how to" without giving them the tools they need to decide "when to" and "why." One of the elements missing in the way we currently envision technical communication is that we expect our students to talk to users and other audiences, we expect them to understand discourse communities by gathering information orally and electronically--but we don't teach them how to *read* technical documents--or even read the

information they gather--and consider what they read in rhetorical terms. We have removed practice from the theory that informs it.

I'm going to turn to some work I did earlier with two colleagues for some help here. In the April 1996 issue of the *Journal of Business and Technical Communication*, we discuss similar issues regarding curricula in law schools. The approach advocated there applies to technical communication as well, even though on the face of it we might think the law is more naturally rhetorical than technical communication. Joseph Williams has suggested that students moving into any new discipline need to be "socialized" into the discourse community before they can adequately use its language for meaningful analysis. In brief, a system that truly combines theory and practice is two-tiered: introductory courses where students are acculturated--"socialized" if you will--into the discourse community of technical writing by learning the basic forms and advanced courses where students investigate and question the forms by exploring their contexts rhetorically.

"For the skilled critical thinker," says Williams, "what is absent is at least as important as what is present." But to know what is absent, to recognize the multiplicity of meaning and the possibilities for contextual resonances requires a developmental movement from the explicit to the implicit. If students are introduced to the forms early in their academic careers, they can gradually become comfortable with the formats and move beyond prescriptive pragmatism to an exploration of the rhetorical.

This approach does not advocate teaching the basic forms in a vacuum. Rather, student should be made aware of the proper form for professional reports, for example, while exploring how various organizational strategies affect the audience and how language can powerfully transform the story the report tells. In these early classes, technical writing must be presented as more than correct prose in correct order. Objectifying prose as correct or incorrect reinforces the dangerous idea that the text itself is the absolute authority, divorced from the social and political forces that shape it. Even in introductory technical communication courses, students need to realize that composing the most standard technical text poses more than one problem with many possible solutions requiring careful attention to the interplay between the audience, the environment, and the document. And it will not have authority simply because it exists.

Such might be the first stage of the two-tiered process--a course where students wrestle with the rhetorical nature of the forms themselves and the variances allowed within strict boundaries. In the second stage--the advanced courses--the students are more acculturated into the discipline and can now turn their attention more fully to the text as social construct, as an artifact of communication. In these classes they realize that composing also involves choices rooted in culture and the politics of power and of knowing. Here is where we encourage them to actually read proposals, technical reports, user guides--whether online or not--and ask questions about them: What does the nature of the text say about its construction? About its application? What do its silences say as well as its voices? What gives it authority? This approach to teaching technical

communication empowers the students to envision possibilities for change and to see hardcopy documents as more than a set of instructions and online material as more than cutting edge technology--and it moves us from teaching courses that are based on giving answers to courses that encourage creativity and critical thinking.

Foucault would call this approach an "architectural critique" of technical communication materials. By looking at a certain document as an artifact in the context of a knowledge system--in this case the system of other such manuals, reports, proposals--we and our students can identify what James Porter has called the "rupture points" within the system that give us a glimpse of the rhetorical construct we have built to give it meaning. Why did we create these forms? What is the meaning of the shifts in methodology, in emphases, in format over the years and among a variety of documents? These decisions made throughout the history of technical communication and still being made today are not simply a blind response to audience analysis questionnaires or constructs built to solve communication problems, they are indicative of significant cognition patterns and the changes in our ways of knowing and shifts in power. Further, exploring technical documents from other countries and cultures can create an additional dimension to our perspectives on the nature of communication. By including more than a discussion of ethics or composition theory, these classes bring rhetoric into the real world of practice.

Identifying the "gaps, "ruptures," "silences," or whatever name you would like to put on these disjunctions, doesn't tear down or deconstruct the discipline of technical

communication. Rather, a poststructuralist approach has as its ultimate aim to become *reconstructive* and allow us and our students to learn how communication works on a deeper level--a more profound level--giving them the knowledge to move forward in exciting ways to invent new approaches and new techniques for effective communication, to understand the "whys" and not just the "how tos."

I would advocate rethinking our entire curricula with an eye for emphasizing the rhetorical nature of our field--from the individual courses to course sequences and requirements. Doing so doesn't mean eliminating the basics or ignoring technology. Rather, approaching the teaching of technical communication in this way gives our students the freedom to join in an ongoing dynamic conversation, to identify issues, and to become leaders in this world, instead of remaining locked in the reactive role of problem solvers led by the technology.

Workplace Trends

- Restructuring
- Downsizing
- Mergers/Acquisitions
- Outsourcing
- Off Shoring
- Curtailment of R & D
- Collaborations
- Contract Workers

SLIDE 2

Marketplace

Then .....Now

- Stable Careers
  - .....**Discontinuous Careers**
- National Economy
  - ..... **Global Economy**
- Individual Work
  - ..... **Team Work**
- Product Driven Orientation
  - ..... **Service Orientation**

SLIDE 1